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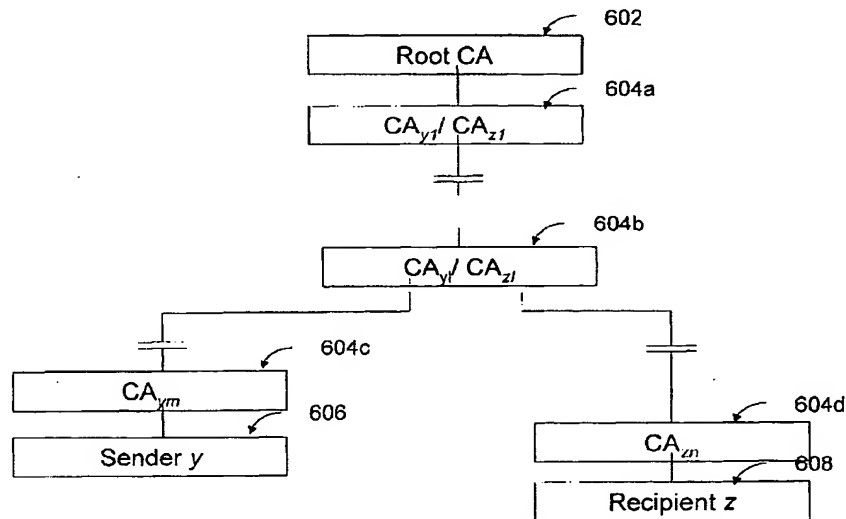
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(54) Title: CERTIFICATE-BASED ENCRYPTION AND PUBLIC KEY INFRASTRUCTURE



(57) Abstract: The present invention provides methods for sending a digital message from a sender (606) to a recipient (608) in a public-key based cryptosystem comprising an authorizer (606). The authorizer can be a single entity (606) or comprise a hierarchical or distributed entity (602, 604a-604b). The present invention allows communication of messages by an efficient protocol, not involving key status queries or key escrow, where a message recipient (608) can decrypt a message from a message sender (606) only if the recipient (608) possesses up-to-date authority from the authorizer. The invention allows such communication in a system comprising a large number (e.g. millions) of users.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/26834

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04L 9/00  
US CL : 713/156, 157

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 713/156, 157

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,867,578 A (BRICKELL et al) 02 February 1999 (02.02.1999), abstract; fig.1 and 3; col.3, lines 44-67; col.4-29.	1-8, 16, 18-25, 27, 28 and 68-71
Y	US 5,774,552 A (GRIMMER) 30 June 1998 (30.06.1998), abstract; fig.1-5 and 13; col.2, lines 43-67; col.3-7 and col.8, lines 1-33.	1-8, 16, 18-25, 27, 28 and 68-71

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